

WHAT IS CLAIMED IS:

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An image pickup apparatus comprising:

an image pickup device;

correction reference signal generation means for generating a correction reference signal from output signals of a vertical optical black pixel portion of the image pickup device, for correcting effective image signals outputted as signal of an effective pixel portion of said image pickup device;

image signal correction means for subtracting said correction reference signal from said effective image signals; and

image pickup device drive means having a plurality of drive modes for driving said image pickup device to read pixel charge as an output signal;

wherein said correction reference signal generation means performing different types of correction reference signal generation processing in generating the reference signal, corresponding to the plurality of drive modes of said image pickup device drive means.

2. The image pickup apparatus according to claim 1, wherein one of said plurality of drive modes is a normal drive mode for severally reading out each pixel charge of

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said image pickup device and another is n-addition drive mode for reading out pixel charges of said image pickup device as vertically added for a predetermined number n (n being a whole number greater than 1).

3. The image pickup apparatus according to claim 2, wherein, even in said n-addition drive mode, readout is exceptionally performed by the normal drive mode for severally reading out each pixel charge when reading out said vertical optical black pixel portion.

4. An image pickup apparatus comprising:
an image pickup device having an effective pixel region formed of a pixel array disposed substantially at the center of a light receiving portion and an optically shielded pixel region formed of a pixel array disposed adjacent to the effective pixel region and covered by a light-shielding member;

drive means for supplying to said image pickup device a plurality of drive clock pattern as drive signals corresponding to a plurality of readout modes and for respectively reading out signals of the effective pixel region and signals of the optically shielded pixel region of said image pickup device corresponding to said plurality of readout modes; and

correction means for subtracting a readout signal of said optically shielded pixel region from a readout signal of said effective pixel region of said image pickup device.

5. The image pickup apparatus according to claim 4, wherein said plurality of readout modes of said drive means comprise a first readout mode for severally reading all the pixels in the effective pixel region and a second readout mode for reading by adding vertically a string of pixels of a predetermined number greater than two in said effective pixel region.

6. The image pickup apparatus according to claim 4, wherein said plurality of readout modes of said drive means comprises a dynamic image taking mode and a still image taking mode.

7. The image pickup apparatus according to claim 4, wherein said optically shielded pixel region comprises a predetermined number of horizontal pixel rows.

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